

REMARKS

Upon entry of this Response, claims 1-29 remain pending in the present patent application.

1. RESPONSE TO OBJECTIONS TO CLAIMS

Claims 13-30 have been objected to because claim 12 is missing from the claim listing. The claim listing has been amended to correct the numbering of the claims. Withdrawal of the objection is respectfully requested.

2. RESPONSE TO REJECTION OF CLAIMS UNDER 35 U.S.C. § 101

Claims 22-26 and 29 have been rejected under 35 U.S.C. § 101 for allegedly being directed to non-statutory subject matter. The claims have been amended to recite that a program is embodied on a computer readable medium, as suggested in the Office Action. Therefore, withdrawal of the rejections is respectfully requested.

3. RESPONSE TO REJECTION OF CLAIMS UNDER 35 U.S.C. § 102

Claims 1, 2, 5-7, 10-11, and 13-29 have been rejected under 35 U.S.C. § 102(e) as allegedly being unpatentable over *Hamiti* (U.S. Patent Publication No. 2004/0047437 A1).

a. Claim 1

As provided in independent claim 1, Applicant claims:

Process for monitoring the quality of service of a communication through a communication network, said process being executed in a end-user terminal and comprising the steps of:

- establishing a session between a first end-user terminal and a second end-user terminal via a signaling plane using a session initiation protocol;
- monitoring the quality of service of the communication during said session;
- *transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session*

initiation protocol message, so that all parties share the same information.

(Emphasis added).

Applicant respectfully submits that independent claim 1 is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least "transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information," as recited and emphasized above.

Hamiti describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that the SIP in general or a header of the SIP in particular is used for monitoring of quality of service. Accordingly, *Hamiti* fails to teach or suggest at least "transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information," as recited in claim 1.

As a result, claim 1 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 1 is respectfully requested.

b. Claims 2, 5-7, and 10-11

Claim 1 is allowable over the cited art of record for at least the reasons given above. Since claims 2, 5-7, and 10-11 depend from claim 1 and recite additional features, claims 2, 5-7, and 10-11 are allowable as a matter of law over the cited art of record.

c. Claim 12

As provided in independent claim 12, Applicant claims:

Process for monitoring the quality of service of a communication through a communication network, said process being executed in a session endpoint and comprising the steps of:

- establishing a session between a first session endpoint and a second session endpoint via a signaling plane;
- ***measuring at at least one of the session endpoints the quality of service of the communication and/or the related signalling;***
- ***transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.***

(Emphasis added).

Applicant respectfully submits that independent claim 12 (which was formerly numbered as claim 13) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least "measuring at at least one of the session endpoints the quality of service of the communication and/or the related signaling" and "transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information," as recited and emphasized above in claim 12.

Rather, *Hamiti* describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that a signaling plane in general or a header of a signaling message in particular is used for monitoring of quality of service. Accordingly, *Hamiti* fails to teach or suggest at least "transmitting QoS information representative of said measured quality of service in the header of the

messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information,” as recited in claim 12. Moreover, *Hamiti* fails to disclose that a session endpoint measures quality of service of a communication or signaling. For at least this reason, *Hamiti* does not teach or suggest “measuring at at least one of the session endpoints the quality of service of the communication and/or the related signaling,” as recited in claim 12.

As a result, claim 12 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 12 is respectfully requested.

d. Claims 13-16

Claim 12 is allowable over the cited art of record for at least the reasons given above. Since claims 13-16 depend from claim 12 and recite additional features, claims 13-16 are allowable as a matter of law over the cited art of record.

e. Claim 17

As provided in independent claim 17, Applicant claims:

An end user terminal comprising means to monitor QoS by:

- establishing a session between a first session endpoint and a second session endpoint via a signaling plane;
- ***measuring the quality of service of the communication and/or the related signalling;***
- ***transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.***

(Emphasis added).

Applicant respectfully submits that independent claim 17 (which was formerly numbered as claim 18) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least “measuring the quality of service of the communication and/or the related signaling” and “transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown

of the session, so that all parties to the session receive said QoS information," as recited and emphasized above.

Hamiti describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that a signaling plane in general or a header of a signaling message in particular is used for monitoring of quality of service. Accordingly, *Hamiti* fails to teach or suggest at least "transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information," as recited in claim 17.

As a result, claim 17 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 17 is respectfully requested.

e. Claims 18-20

Claim 17 is allowable over the cited art of record for at least the reasons given above. Since claims 18-20 depend from claim 17 and recite additional features, claims 18-20 are allowable as a matter of law over the cited art of record.

f. Claim 21

As provided in independent claim 21, Applicant claims:

A computer readable medium encoded with a computer program comprising program code elements for causing, when executed, a computer to monitor QoS using a process comprising:
establishing a session between a first session endpoint and a second session endpoint via a signaling plane;

measuring the quality of service of the communication and/or the related signalling; and
transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information.

(Emphasis added).

Applicant respectfully submits that independent claim 21 (which was formerly numbered as claim 22) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least “transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information,” as recited and emphasized above.

Rather, *Hamiti* describes that a “Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals.” Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is “used to monitor quality of service (QoS) and to give information about the participants of a communication session.” *Hamiti* states that “[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data.” Para. 0089. As such, *Hamiti* does not disclose that a signaling plane in general or a header of a signaling message in particular is used for monitoring of quality of service. Accordingly, *Hamiti* fails to teach or suggest at least “transmitting QoS information representative of said measured quality of service in the header of the messages used in set-up or teardown of the session, so that all parties to the session receive said QoS information,” as recited in claim 21.

As a result, claim 21 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 21 is respectfully requested.

g. Claims 22-25

Claim 21 is allowable over the cited art of record for at least the reasons given above. Since claims 22-25 depend from claim 21 and recite additional features, claims 22-25 are allowable as a matter of law over the cited art of record.

h. Claim 26

As provided in independent claim 26, Applicant claims:

A process for monitoring the quality of service of a communication through a communication network, said process being executed in a proxy server and comprising the steps of: ***extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters; and displaying said parameters to a user via a user interface.***

(Emphasis added).

Applicant respectfully submits that independent claim 26 (which was formerly numbered as claim 27) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least "extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters; and displaying said parameters to a user via a user interface," as recited and emphasized above.

Hamiti describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that a header of a message used

to set-up or teardown a session is used to transport QoS information representative of measured quality of service measured at an endpoint. Accordingly, *Hamiti* fails to teach or suggest at least “extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters; and displaying said parameters to a user via a user interface,” as recited in claim 26.

As a result, claim 26 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 26 is respectfully requested.

i. Claim 27

As provided in independent claim 27, Applicant claims:

A proxy server comprising means to monitor QoS by: ***extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface.***

(Emphasis added).

Applicant respectfully submits that independent claim 27 (which was formerly numbered as claim 28) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least “extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface,” as recited and emphasized above.

Hamiti describes that a “Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals.” Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is “used to monitor quality of service (QoS)

and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that a header of a message used to set-up or teardown a session is used to transport QoS information representative of measured quality of service measured at an endpoint. Accordingly, *Hamiti* fails to teach or suggest at least "extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface," as recited in claim 27.

As a result, claim 27 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 27 is respectfully requested.

j. Claim 28

As provided in independent claim 28, Applicant claims:

A computer readable medium encoded with a computer program comprising program code elements for causing, when executed, a computer to monitor QoS by ***extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface.***

(Emphasis added).

Applicant respectfully submits that independent claim 28 (which was formerly numbered as claim 29) is allowable for at least the reason that *Hamiti* does not disclose, teach, or suggest at least "extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface," as recited and emphasized above.

Hamiti describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti* states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that a header of a message used to set-up or teardown a session is used to transport QoS information representative of measured quality of service measured at an endpoint. Accordingly, *Hamiti* fails to teach or suggest at least "extracting QoS information representative of measured quality of service measured at one or more session endpoints from the headers of one or more messages used in set-up or teardown of a session; processing said extracted QoS data to produce displayable QoS parameters and displaying said parameters to a user via a user interface," as recited in claim 28.

As a result, claim 28 is patentable over *Hamiti*, and the withdrawal of the rejection of claim 28 is respectfully requested.

4. RESPONSE TO REJECTION OF CLAIMS UNDER 35 U.S.C. § 103

Claims 3-4, 8-9, and 30 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over *Hamiti* (U.S. Patent Publication No. 2004/0047437 A1) in view of *D'Eletto* (U.S. Patent Publication No. 2005/0094623 A1).

a. Claims 3-4 and 8-9

Claim 1 is allowable over the cited art of record for at least the reasons given above and for the additional reason that *D'Eletto* does not remedy the deficiencies of the *Hamiti* reference. Since claims 3-4 and 8-9 depend from claim 1 and recite additional features, claims 3-4 and 8-9 are allowable as a matter of law over the cited art of record.

b. Claim 29

As provided in independent claim 29, Applicant claims:

Process for monitoring the quality of service of a communication through a communication network, said process being executed in a end-user terminal and comprising the steps of:

- establishing a session between a first end-user terminal and a second end-user terminal via a signaling plane using a session initiation protocol;
- monitoring the quality of service of the communication during said session;
- ***transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information, and further wherein said session is used for transmitting voice services through at least a first and a second proxy and that said QoS information include a parameter representative of the time taken between one invite is transmitted to said first proxy and said proxy forwards it to said second proxy.***

(Emphasis added).

Applicant respectfully submits that independent claim 29 (which was formerly numbered as claim 30) is allowable for at least the reason that *Hamiti* in view of *D'Eletto* does not disclose, teach, or suggest at least "transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information, and further wherein said session is used for transmitting voice services through at least a first and a second proxy and that said QoS information include a parameter representative of the time taken between one invite is transmitted to said first proxy and said proxy forwards it to said second proxy," as recited and emphasized above in claim 29.

Hamiti describes that a "Session Initiation Protocol (SIP) represents a protocol which may be used e.g. for call and connection establishment as well as for transport of endpoint capability information. Such capability information may e.g. relate to voice and multimedia codecs supported by the end terminals." Para. 0010. *Hamiti* further describes that RTP control protocol (RTCP) is "used to monitor quality of service (QoS) and to give information about the participants of a communication session." *Hamiti*

states that "[p]resent proposals for the packet-switched speech transmission makes use of SIP/SDP for call control and RTP/RTCP protocols for the transmission of speech data." Para. 0089. As such, *Hamiti* does not disclose that the SIP in general or a header of the SIP in particular is used for monitoring of quality of service. Accordingly, *Hamiti* fails to teach or suggest at least "transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information, and further wherein said session is used for transmitting voice services through at least a first and a second proxy and that said QoS information include a parameter representative of the time taken between one invite is transmitted to said first proxy and said proxy forwards it to said second proxy," as recited in claim 29.

With regard to *D'Eletto*, it describes methods and systems for creating and correlating call detail records (CDRs). *D'Eletto* describes that a method "of creating a CDR is by signaling monitoring. That is, using an external device to monitor all call signaling, keep track of call state, and generate an independent CDR." Para. 0066. *D'Eletto* further describes that "SIP messaging allows intelligent IP devices to set up multimedia sessions between themselves. SIP messages contain 'headers' that describe call parameters. Typically the body contains information that describes details about the IP session for the VoIP call. The body may also contain an embedded SS7 message or even a message in another protocol." Para. 0070 (Emphasis added). As such, *D'Eletto* does not disclose that the SIP in general or a header of the SIP in particular is used for monitoring of quality of service. Rather, *D'Eletto* states that a header of a SIP message contains call parameters and the body of the SIP message contains details about the IP session for the VoIP call. Accordingly, *D'Eletto* individually or in combination with *Hamiti* fails to teach or suggest "transmitting information representative of said quality of service during said session using said signaling plane, wherein the QoS information is transmitted within the header of a session initiation protocol message, so that all parties share the same information, and further wherein said session is used for transmitting voice services through at least a first and a second proxy and that said QoS information include a parameter representative of the time

taken between one invite is transmitted to said first proxy and said proxy forwards it to said second proxy," as recited in claim 29.

As a result, a *prima facie* case of obviousness has not been established, and claim 29 is patentable over the proposed combination of *Hamiti* in view of *D'Eletto*. Therefore, withdrawal of the rejection of claim 29 is respectfully requested.

CONCLUSION

For at least the reasons provided above, Applicant respectfully submits that all rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

Respectfully submitted,



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